

impunctate, reddish brown with a large dark area on either side. Elytra not much wider than prothorax with small humeri and short intra-humeral sulcus and very little depression below, the basal callosities not at all prominent; surface shining, striate punctures well spaced and distinct; in color pale yellow brown with remnants of spots about base, a large one on each elytron below the middle near the suture, and a smaller one near lateral margin. Body beneath tending to be reddish brown or piceous, especially on breast; legs with dark bands both on femora and tibiae, and the tarsal joints dark, all femora with a trace of a tooth, most pronounced on the hind femora. Claws with short tooth. Length 4.7–5.6 mm; width 2.8–3.1 mm.

Type female, Mus. Comp. Zool. no. 27357.

ZOOLOGY.—*A new crawfish of the genus Procambarus from Louisiana (Decapoda: Astacidae).*¹ GEORGE HENRY PENN, New Orleans, La. (Communicated by W. L. SCHMITT.)

The new species of crawfish described herein has been collected on several occasions during the past eight years by different carcinologists and though recognized as an undescribed species has been neglected by each because of more pressing duties. Dr. Horton H. Hobbs, Jr., of the University of Florida, and Dr. Rendell Rhoades, of the Ohio Division of Conservation and Natural Resources, have both kindly furnished me with their collections of the species for comparison with the type material in making the descriptions.

I take great pleasure in naming this species in honor of Mr. Percy Viosca, Jr., of New Orleans, who collected the type specimens and to whom I have been indebted for many favors in the past decade.

***Procambarus vioscai*, n. sp.**

Diagnosis.—Rostrum with prominent lateral spines; areola moderately narrow. Thoracic region of carapace less than half as long as cephalic region. First pleopod of first form male terminating in four parts: mesial process² a

Type locality.—Mount Diego de Acampo, Dominican Republic, altitude 3,000–4,000 feet; collected in July 1938 by P. J. Darlington.

Other localities.—Villa Altagracia, Dominican Republic, July 1938, San Jose de las Matas, 1,000–2,000 feet altitude, June 1938, both collected by P. J. Darlington; Puerto Plata, Dominican Republic, collected by Donald Hurst; Mount Basil, northern Haiti, 4,700 feet altitude, September 9, 1934, collected by P. J. Darlington; Furcy, Haiti, collected by W. M. Mann.

Remarks.—This species resembles *Metachroma rosae* Byrant, described from Jamaica, but specimens from Jamaica tentatively identified as *rosae* are smaller, paler, and with much denser punctures on the elytra.

long tapering spine projecting caudolaterally; cephalic process a bladelike process projecting ventrocaudally; central projection heavy, blunt-tipped; caudal process very small, blunt-tipped.

Male holotype (form I).—Body subovate, compressed dorsoventrally. Abdomen about same width as cephalothorax.

Areola wide (length five times width); sides converge dorsally in hourglass type marking, indistinct caudally; areola 26.8 percent of entire length of carapace; six punctations across narrowest part of areola.

Rostrum widest at base, gently tapering, slightly excavate; acumen long (about one-sixth length of cephalic portion of carapace). Lateral spines strong. Postorbital ridges terminating anteriorly in long, sharp, anterolaterally projecting spines.

Surface of carapace bearing fine tubercles and punctations. Two large spines projecting anteriorly on each side of carapace along cervi-

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² The terminology used here in describing the parts of the first pleopod of the form I male is that proposed by Hobbs (*On the first pleopod of the male Cambari*, Proc. Florida Acad. Sci. 5: 55–61, 1942; and *Notes on the first pleopod of the male Cambarinae*, Quart. Journ. Florida Acad. Sci. 8: 67–79, 1945.)

cal groove. Cephalolateral margins of thoracic region of carapace each with one strong spine near anterior extremity of cervical groove.

Abdomen same width as cephalothorax, slightly tapering posteriorly; approximately equal to cephalothorax in length.

Antennules of usual form.

Antennae nearly equal to total length of crawfish; of normal form.

Antennal scales extending to tip of rostrum, with the usual strong spine on outer margin; triangular in shape, widest point about one-third of distance from base.

First right pereiopod entirely tuberculate;

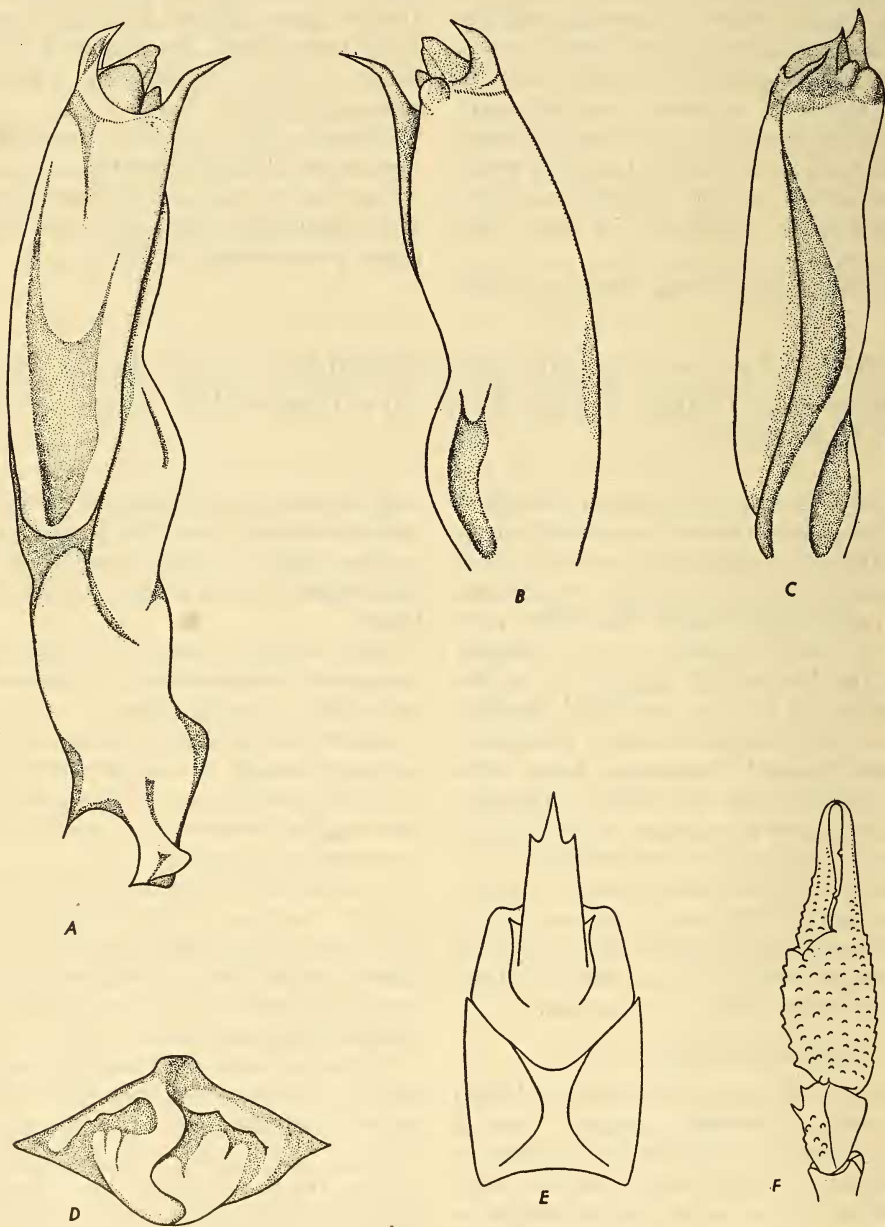


FIG. 1.—*Procambarus vioscai*, n. sp.: First right pleopod of holotype male form I: A, mesial view; B, lateral view; C, caudal view; D, annulus ventralis of female allotype; E, cephalothorax (holotype); F, right chela (holotype).

palm compressed dorsoventrally. Movable finger terminating distally in a sharp, corneous tip bent laterad and extending below the tip of the immovable finger when the fingers are closed; both margins with small tubercles, strongest near base.

Immovable finger with inner marginal ridge bearing small tubercles, and terminating in a sharp corneous tip bent mesially.

Ischiopodites of third and fourth pereopods bearing hooks. Hooks strong, corneous, bent toward base of the ischiopodite. Hook on third pereopod stronger.

First pleopod extending to base of third pereopod; tip ending in four distinct parts as follows: mesial process most prominent, extending laterad in a long, tapering, slightly curved spine. Cephalic process corneous, also prominent, flattened laterally and slightly curved or excavate on its median aspect, appearing as a bladelike process. Central projection corneous, blunt-tipped; line of fusion of centrocephalic and centrocaudal processes clearly marked. Caudal process corneous, very small, blunt-tipped. Rim of apical knob with a ring of setae which hides all except the mesial process from view in fresh specimen.

Female allotype.—The female differs from the male in the following points: carapace more nearly cylindrical in cross section. Annulus ventralis: sinus originating along midventral line in a flattened trough just posterior to anterior margin, turning slightly sinistrad, caudad for about a third of its length, slightly dextrad, caudad for another third of its length, sinistrad, and sharply dextrad, terminating along the caudal margin in a tubercle. On each side the surface is depressed so that the anterior margin forms a ridge, which in turn is shaded anteriorly by the projecting edge of the sternum.

Measurements.—The holotype: carapace, height 18.5 mm, width 17.4 mm, length 41.3 mm; areola, width 2.0 mm, length 11.1 mm; rostrum, length 30.2 mm; abdomen, length 42.0 mm; right chela, length of outer margin 24.0 mm, width at widest point 6.6 mm, length of inner margin of movable finger 16.0 mm, length of inner margin of palm 13.5 mm. The allotype: carapace, height 13.5 mm, width 13.5 mm, length 31.1 mm; areola, width 2.0 mm, length 8.5 mm; rostrum, length 22.6 mm;

abdomen, length 32.5 mm; right chela, length of outer margin 15.7 mm, width at widest point 5.2 mm, length of inner margin of movable finger 8.2 mm.

Type specimens.—The male holotype (form I), no. 79925, a male paratype (form I), no. 79926 from the type locality, and the female allotype, no. 79931, from Kingsville, Grant Parish, La., are deposited in the United States National Museum.

Type locality.—Big Creek at Fishville, about 3 miles east of Pollock, Grant Parish, La. They were collected on February 22, 1938, by Percy Viosca, Jr., from the margin of the creek among leaves and other debris accumulated on the lee side of a sandbar. Big Creek is a typical, swift-flowing, sand-bottomed pinewoods Louisiana stream; south of Fishville it joins the Little River. Other crawfishes collected in the same ecological niche with *P. vioscai* were *Procambarus blandingii acutus*, *Orconectes creolanus*, and another species of *Procambarus* as yet undescribed.

Additional specimens examined.—One male form II, 2 females, and 11 juveniles from Rock Creek near Kingsville, Grant Parish, La., U.S.N.M. no. 79927. One male form I, 2 males form II, 4 females, and 2 juveniles from Pollock, Grant Parish, La., deposited in the Alabama State Museum of Natural History at the request of Dr. Rendell Rhoades. One male form II and a female from Calhoun, Ouachita Parish, La. (no. 7-3141-7); 1 male form I and 2 females from Richland Creek near Jackson, Rankin County, Miss. (no. 7-3141-10a); 3 males form I, 2 females, and 6 juveniles from Magee, Simpson County, Miss. (no. 7-3141-12); and 1 male form I, 1 female, and 1 juvenile from Big Swamp near Seminary, Covington County, Miss. (no. 7-3141-13) in the collections of Dr. Horton H. Hobbs, Jr., at the University of Florida.

Relationships.—This species belongs to the section of *Procambarus blandingii*, group of *P. spiculifer*. Its closest relative appears to be *Procambarus versutus*.

Discussion.—Among the series of specimens examined, those from Calhoun, La., and Jackson, Magee, and Seminary, Miss., in Dr. Hobbs's collections appear to be of a smaller race than typical *P. vioscai* and may subsequently be recognized as a subspecies.